

**ABSTRACT**

Methods for identifying patients having or at risk of developing prostate cancer (including hormone refractory or androgen independent prostate cancer) and patients having or at risk of developing a cancer arising from metastasis if a prostate cancer to another tissue, e.g., liver and lymph node, by measuring the expression or activity of alpha-methylacyl-CoA racemase are described. The invention also provides: methods of screening for compounds that can be used to treat prostate cancer (including hormone refractory or androgen independent prostate cancer) or metastases of prostate cancer by screening for compounds that modulate the expression or activity of the alpha-methylacyl-CoA racemase polypeptides or nucleic acids; a process for modulating (i.e., reducing) alpha-methylacyl-CoA racemase polypeptide or nucleic acid expression or activity, e.g., using the screened compounds; and methods for selecting patients for therapy with a compound that reduces the activity or expression of alpha-methylacyl-CoA racemase as well as methods for determining whether such a therapy should be continued in a patient.

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